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EXAMINER	
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ART UNIT	PAPER NUMBER
2462	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,734	EVANS, PAUL ANDREW	
	Examiner	Art Unit	
	KHOA HUYNH	2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07/28/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/28/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Applicants' amendment received on 07/28/2009.

Claim Status

2. Claims 1-2, 5-12 are amended.

3. Claims 13-15 are cancelled.

4. Claims 1-12 are currently presenting for examination, with claims 1 and 6 being independent.

Objections Status

5. Amendment to the specification and drawings had been received. Therefore, the corresponding objections are withdrawn.

6. This action has been made **FINAL**.

Response to Arguments

7. Applicant's arguments received on 07/28/2009 have been considered but are not persuasive and moot in view of the new ground(s) of rejection.

8. The followings are Examiner's response to applicants' arguments.

9. First of all, Examiner would like to express gratitude to Applicants' representative for the time he spent on writing such detailed response which superbly clarified a lot of vague aspects of the claimed invention.

10. Examiner would further appreciate it if in the next response, a few more answers could be provided to resolve the following uncertainties.

11. On page 11 of the response, applicant's representative states that one of the main point of the invention is that the invention "allows a terminal to share the bandwidth of the connections with other terminals". However this idea is not being claimed. Applicants' representative is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. On page 12 of the response, applicant's representative states that another main idea of the invention is that "each of the plurality of terminals has a respective wide area connection to the Internet". It seems Applicants' representative might have a different interpretation of the term "respective wide area connection" from the interpretation of one of ordinary skills in the art. "Respective wide area connection" doesn't mean "different wide area connection" or "direct wide area connection". Therefore Examiner thinks applicant's representative would agree that Datta clearly teaches "each of the plurality of terminals has a respective wide area connection to the Internet" (Datta, page 1, paragraph 7, fig 3, connects to internet through WAN 114). Applicants' representative is reminded that although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

13. On page 13 of the response, applicant's representative states that "one of the advantages of applicant's claimed invention is that there is no need for a centralized controller". However this idea is not being claimed. Applicants' representative is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

14. The referenced citations made in the rejection(s) are intended to exemplify areas in the prior art document(s) in which the Examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record.

15. Therefore, in the next response, Examiner would appreciate it if Applicants' representative could clearly point out any other patentable novelty that he or she thinks the claimed invention presents in view of the state of the art disclose by the references as a whole.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. **Claims 1-3, 6-10** are rejected under 35 U.S.C. 102(b) as being anticipated by **Datta, US 2003/0031180**.

18. **For claim 1**. Datta teaches: In a local area network comprising a plurality of terminals for running client applications and connecting to the Internet (Datta, fig 3, page 1, paragraph 7, local area network connects to internet), each of said terminals having the ability to divide a request into a plurality of packets and distribute the plurality of packets via the local area network (Datta, page 19, paragraph 88, divides requests (from the clients to a server on the Internet) over multiple paths; page 12, paragraph 61, controller 308 can be implemented as a software on each of individual nodes), a method of sending data over a communications network (Datta, fig 3, data are sent over the communication network depicted from node 306 to node 330), the method comprising the steps of

(a) an originating terminal generating a request for a content server (Datta, page 12, paragraph 68, fig 3, node 306 generates a request for content from node 330);

(b) the originating terminal dividing the request into a plurality of packets (Datta, page 19, paragraph 88, fig 3, controller 308 divides the request into plurality of packets and distribute them to routers 310, 312, 314; even though the controller 308 is illustrated as a separate entity from node 306, according to page 12, paragraph 61, controller 308 can be implemented as a software on node 306);

(c) the originating terminal distributing the plurality of packets between a first plurality of terminals in the local area network (Datta, fig 3, packets are distributed over plurality of routers 310, 312, 314 in the first local area network), each of said first plurality of terminals (110a, 110b, 110c and 110d) having a respective wide area connection to the Internet (Datta, page 1, paragraph 7, fig 3, connects to internet through WAN 114 is provided), the plurality of packets being distributed over the local area network (Datta, fig 3, packets are distributed over plurality of routers 310, 312, 314 in the first local area network);

(d) each of said first plurality of terminals transmitting packets received during step (c) over said associated wide area connection to a reconstitution server located on the Internet (Datta, page 5, paragraph 55, fig 3, plurality of routers 310, 312, 314 transmit packets to controller 328 in the second network which is capable of restore/reconstitute the packets);

and (e) the reconstitution server receiving the plurality of packets and sending the plurality of packets to the content server (Datta, fig 3, controller 308 receives the packets and sends them to node 330).

19. **For claim 2**. Datta discloses all the limitations of claim 1, comprising the further steps of:

(f) the content server sending content data to the reconstitution server in response to the request received in step (e), (Datta, page 3, paragraph 25, fig 3, node 330 send packets back to controller 328 in response to the request)

the data being sent as a plurality of content data packets (Datta, page 3, paragraph 26, "the responses to these requests also come back through multiple routers"; Datta, page 13, paragraph 78, "Note that there may be multiple responses from the LAN server to a single request, as when a web page references various images that are sent in separate responses");

(g) the reconstitution server distributing the plurality of content data packets to the first plurality of terminals over the respective wide area connections (Datta, fig 3, controller 328 distributes packets to routers 324, 326 which are subsequently connected to routers 310, 312, 314 through WAN 114);

(h) the first plurality of terminals sending the plurality of content data packets to the originating terminal (Datta, fig 3, routers 310, 312, 314 send the data packets to node 306);

and (i) the originating terminal receiving the plurality of content data packets to re-create the content data (Datta, page 3, paragraph 27, fig 3, controller 308 receives the data packets and recreate the content data).

20. **For claim 3**. Datta discloses all the limitations of claim 2, and Datta further teaches: wherein in step (c) and/or step (g), the plurality of packets are distributed to the first plurality of terminals in a round-robin basis (Datta, page 19, paragraph 84, packets are distributed to plurality of routers 110 using round-robin approach).

21. **For claim 6**. Datta teaches: A communications network (Datta, fig 3, data are sent over the communication network depicted from node 306 to node 330) comprising:

a plurality of terminals, each terminal configured for running client applications and connecting to the Internet, the terminals being connected by a local area network and at least some of said terminals having a respective wide area connection to the Internet, (Datta, fig 3, plurality of routers 310, 312, 314 and nodes 102s and controller 308 are connected to local area network and to the Internet through WAN 114)

said plurality of terminals each having the ability to divide a request into a plurality of packets and distribute the plurality of packets via the local area network (Datta, page 19, paragraph 88, divides requests (from the clients to a server on the Internet) over multiple paths; page 12, paragraph 61, controller 308 can be implemented as a software on each of individual nodes);

the Internet including a reconstitution server and a plurality of content servers (Datta, fig 3, second network, which is part of the Internet that the first network connects to comprises controller 328 which is capable of restore/reconstitute packets and plurality of nodes 102 which are capable of serving content),

wherein, in use, an originating terminal in the local area network generates a request for one of the content servers, (Datta, page 12, paragraph 68, fig 3, node 306 generates a request for content from node 330)

divides the request into a plurality of packets (Datta, page 19, paragraph 88, fig 3, controller 308 divides the request into plurality of packets and distribute them to routers 310, 312, 314)

and distributes the plurality of packets between a plurality of terminals via the local area network (Datta, fig 3, packets are distributed over plurality of routers 310, 312, 314 in the first network),

and each of said plurality of terminals configured for sending packets received to the reconstitution server via the respective wide area connections (Datta, page 5, paragraph 55, fig 3, plurality of routers 310, 312, 314 transmit packets to controller 328 in the second network which is capable of restore/reconstitute the packets),

and the reconstitution server sends the plurality of packets to the content server (Datta, fig 3, controller 308 receives the packets and sends them to node 330).

22. **For claim 7**. Datta discloses all the limitations of claim 6, and
Datta further teaches: wherein, in use, the content server sends content data to the reconstitution server in the form of a plurality of content data packets (Datta, page 3, paragraph 25, fig 3, node 330 send content data packets back to controller 328 in response to the request),

the reconstitution server distributes the plurality of content data packets between the plurality of terminals over the respective wide area connections (Datta, fig 3, controller 328 distributes packets to routers 324, 326 which are subsequently connected to routers 310, 312, 314 through WAN 114),

the plurality of terminals route the plurality of content data packets to the originating terminal (Datta, fig 3, routers 310, 312, 314 send the data packets to node 306);

and the originating terminal receives the plurality of content data packets and re-creates the content data (Datta, page 3, paragraph 27, fig 3, controller 308 receives the data packets and recreate the content data).

23. **For claim 8**. Datta discloses all the limitations of claim 6, and Datta further teaches: wherein one or more of said plurality of terminals has more than one respective wide area connection. (Datta, page 4, paragraph 40, controller which can be one of the terminals has multiple interfaces for multiple WAN connections)

24. **For claim 9**. Datta discloses all the limitations of claim 6, and Datta further teaches: wherein the local area network comprises one or more terminals, further to said plurality of terminals, not having a wide area connection. (Datta, page 2, paragraph 13-14, unnessary access to the WAN 114 are reduced since WAN bandwidth is limited, therefore one or more terminals could be not allow to connect to WAN)

25. **For claim 10**. Datta discloses all the limitations of claim 6, and Datta further teaches: wherein each of the active terminals in the local area network comprises a list identifying the other active terminals (Datta, page 5, paragraph 60, fig 4, controller 202 contains router identifiers 402, 404 which is a list that identifies other active terminals)..

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

27. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

28. **Claims 4, 5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Datta, US 2003/0031180** in view of **Gray, US 6,178,448.**

29. **For claim 4**. Datta discloses all the limitations of claim 3, however Datta fails to teach: wherein the round robin distribution of the plurality of packets is weighted.

Gray from the same or similar fields of endeavor teaches: wherein the round robin distribution of the plurality of packets is weighted (Gray, column 3, lines 39-42, "This distribution of packets among the concurrent links is presently accomplished in a number of ways, including round-robin, weighted round-robin and link metered pacing approaches")

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Gray into Datta, since Datta suggests a technique of distributing packets, and Gray suggests the beneficial way of including weighted round-robin distribution in such technique since weighted round-robin is a well-known distribution technique and according to Datta any suitable load balancing or load sharing algorithm can be used with his invention (Datta, page 12, paragraph 14) in the analogous art of data communication.

30. **For claim 5**. Datta and Gray disclose all the limitations of claim 4, however Datta fails to teach: whereon the round robin weighting is determined in accordance with the bandwidth of the respective wide area connection between the terminal and the Internet.

Gray from the same or similar fields of endeavor teaches: whereon the round-robin weighting is determined in accordance with the bandwidth of the connection between the terminal and the second network (Gray, column 4, lines 20-22, "The weight values typically are based on link speeds and provide a simple way to load balance the flow over the sublinks"; link speeds is bandwidth)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Gray into Datta, since Datta suggests a technique of distributing packets, and Gray suggests the beneficial way of including weighted round-robin distribution based on bandwidth in such technique since weighted round-robin based on bandwidth is a well-known distribution technique and according to Datta any suitable load balancing or load sharing algorithm can be used with his invention (Datta, page 12, paragraph 14) in the analogous art of data communication.

31. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Datta, US 2003/0031180** in view of **Barron, US 2002/0152414.**

32. **For claim 11**. Datta discloses all the limitations of claim 10, however Datta fails to teach: wherein, in use, each active terminal periodically sends a first status message to the other terminals in the local area network to indicate that it is active.

Barron from the same or similar fields of endeavor teaches: wherein, in use, each active terminal periodically sends a first status message to the other terminals in the local area network to indicate that it is active. (Barron, page 1, paragraph 4, heartbeats message are periodically send to other terminals to indicate that the sending node is still connected to the network)

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Barron into Datta, since Datta

suggests a technique of distributing packets, and Barron suggests the beneficial way of including heartbeats message in such technique so each terminal of the network can know if the network is operating and who the other terminals are so unnecessary transmission could be avoided and therefore improve network efficiency (Barron, page 1, paragraph 3) in the analogous art of data communication.

33. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Datta, US 2003/0031180** in view of **Zhao, US 2004/0224694.**

34. **For claim 12**. Datta discloses all the limitations of claim 10, however Datta fails to teach: wherein an active terminal sends a second status message to the other terminals in the local area network prior to becoming inactive.

Zhao from the same or similar fields of endeavor teaches: wherein an active terminal sends a second status message to the other terminals in the local area network prior to becoming inactive. (Zhao, page 4, paragraph 56, "When the wireless data device 10 powers down, it notifies its data inactive status by sending a Data Inactive Messages 66A and 66B to push servers 52 and 54 respectively")

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the teachings of Zhao into Datta, since Datta suggests a technique of distributing packets, and Zhao suggests the beneficial way of including data inactive messages in such technique so other terminals in the network can know if about inactive terminals and avoid unnecessary transmission, therefore

improve network efficiency (Zhao, page 3, paragraph 41) in the analogous art of data communication.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHOA HUYNH whose telephone number is (571) 270-7185. The examiner can normally be reached on Monday - Friday: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SEEMA RAO can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art Unit 2462

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